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TRANSPORTATION

No. 64



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RAILROAD

CURRENT STATE OF RAILROAD INDUSTRY SURVEYED

Six-Month Results

Moscow GUDOK in Russian 25 Jun 81 p 1

[Article: "The Six Months Successfully Completed--A Journal of Shipments"]

[Text] On the country's railroad mainlines there has been widespread development of competition for successful accomplishment of this six-month plan for shipments. To accomplish this important task it is necessary to step up the level of loading in the last 10 days of the month. In the first two ten-day periods most of the roads overfulfilled the loading plan. The best results were obtained by the Moscow, L'vov, North Caucasus, Sverdlovsk, Volga, and Belorussian railroads. They shipped a million tons of freight over and above the plan. However, not all the roads are operating with this kind of success. Especially lagging are the Gor'koy, Donetsk, Azerbaijan Tselinma, Northern and Alma-Ata roads. They shipped 1.8 million tons below the plan. It is true that as a result of the substantial aid, the Donetsk road is actively making up the amount of its arrears. The others, on the other hand, are increasing their indebtedness. The plan was overfulfilled and the shipment consisted of 3.9 million tons of freight more than in the corresponding period of 1980. The increase was for critical freight--petroleum products, ore, mineral fertilizers and timber. But the supplementary assignment for the shipment of coal was not fulfilled. They are lagging behind the plan for loading of refractory ores, timber and mineral fertilizers.

In June, serious difficulties are developing in fulfillment of the plan because of the failure of the freight shippers to present the materials for transport. On the Kemerovo, Donetsk and Transbaykal roads there was not enough coal and on the Southern Railroad not enough ore. On many of the roads they are not presenting the full amount of timber and mineral fertilizers. But even the railroads are not always supplying the cars for this freight.

In the remaining days of June it will be necessary to mobilize the efforts of the shippers and transport workers to fulfill the prescribed tasks. On all the railroads there are now sufficient loading resources for a considerable overfulfillment of the assignments. We must obtain urgent fulfillment of the amounts of traffic. The managers of the Gor'kiy, Kuybyshev and Azerbaijan roads must organize efficient operation of the junctions. They are the ones largely responsible for the movement of cars from the rolling stock fleet to the destination points on the eastern and Caucasus lines.

In the recent period there has been a worsening of the situation in respect to the exchange with trains at Tayshet, Mariinsk, and Arkhar. The transit surplus there has exceeded 6,000 cars. The collectives of the Southeastern, Alma-Ata, Southwestern and Oktyabr' lines must improve the advance of railroad car turnover.

On the network there has developed an unfavorable situation with respect to unloading. A number of the roads are filled with local freight and they are not fulfilling the unloading norms mainly because of the poor work of the recipients. In particular, on the Central Asian, Far Eastern and Azerbaijan lines alone the local freight exceeds the norm by 12,000 cars but on these lines they are unloading 1,600 cars a day less than the norm. At the same time, the Moscow, Belorussian, West Kazakhstan and Sverdlovsk lines are experiencing a shortage of local freight. In the last two ten-day periods they unloaded 7,000 cars a day less than the planned amount. It should be borne in mind that the shipment of mass-consumption freight cannot be provided for without a high level of regulation discipline. It is necessary to step up the delivery of empty flatcars to replenish the fleet on the coal-loading roads, especially the Kemerovo and Tselinna lines.

The ministry is now implementing measures for transferring the empty covered cars from the Eastern, Ural-Siberian, and Central Asian lines to the European part of the network for the preparation of this rolling stock for mass shipments of the new harvest. Fulfillment of the assignment established by the ministry must be placed under the special control of the managers of the roads and branches.

Ministry Conference

Moscow GUDOK in Russian 7 Jul 81 pp 1-2

[Article: "Above the Rate and Quality of the Shipments--From the Enlarged Session of the MPS [Ministry of Railways Board"]

[Text] As has already been reported in GUDOK, a few days ago there took place an enlarged session of the board of the Ministry of Railways, a session participated in by the chiefs of the branches of the roads. The session reviewed the results for the first six months and discussed measures for unconditional fulfillment of the yearly plan for shipments, improvement of the passenger service, and provisions for the safety of the train traffic. The chiefs of a number of the branches of the roads reported that they are taking steps for elimination of the deficiencies, enhancement of the effectiveness and quality of the work, and for successful implementation of the assignments of the first year of the 11th Five-Year Plan and the socialist obligations assumed by the collectives.

The reporting speakers were Deputy Minister of Railways K. V. Kulayev, Chief Inspector for Traffic Safety of MPS Yu. A. Tyupkin, chief of the Main Administration for Passenger Service V. S. Kolpakov, and speakers at the session--Deputy Minister and Chief of the Main Administration of Track B. A. Morozov, and the chiefs of these main administrations--locomotive operation - P. I. Kel'peris, railroad car operations - L. V. Shovskiy, freight - N. P. Kul'mach, First Deputy Chief of the

Main Administration for Traffic V.A. Volkov, and chief of the administration for regulation and organization of the rolling stock fleets - V. P. Blazhiyevskiy. They analyzed the progress of fulfillment of the plan of shipments, primarily of critical goods, and they pointed out serious deficiencies in the organization of the shipment process as well as gross violations of regulation discipline.

The participants in the session of the board cited examples of a disparaging attitude toward the requirements of traffic safety and adherence to the prescribed technology. There are also facts which demonstrate that some managers are spending nearly all their time on current operational work and do not seriously concern themselves with administration. It was shown how the poor organization of operation and the inferior quality of current maintenance and repair of the locomotives, cars, tracks and the STsB [signalization, centralization, block system] and power supply units are leading to disruptions in traffic and sometimes the breakdowns and accidents. Cited by name were the managers of the branches where things were going most poorly, where the educational work had declined, and where violations of discipline had made themselves felt with particular acuity. At the same time, there were indicated the places with advanced work experience which ought to be disseminated everywhere.

The session of the board noted that in the first six months of the year the plan for shipments had been overfulfilled. Shipment comprised 22 million tons of freight more than in the comparable period last year. The plan was fulfilled for shipments of petroleum and petroleum products, iron and manganese ore, ferrous metals and grain and construction freight.

However, one-fifth of all the branches have not been successful with their assignments and some have even had a decline in the volume of shipments as compared to the corresponding period of 1980. These branches were to blame for the undershipment of about 18 million tons of output.

The largest deficit occurred at the Gor'kiy, Vladimir, Kazan', Izhevsk, Omsk, Bratsk, Pavlodar, Tselinograd, Chusov, Orsk, Zaporozh'ye, Debal'tsevo, Yasinovatskiy and several other branches.

There are, of course, objective reasons as well. First of all, the failure of the freight shippers to submit their requisitions. But what can one say about these facts when, because of the underdelivery of railroad cars, the plan for overall loading or shipment of various critical products is underfulfilled by only several thousand tons despite work on the scale of millions of tons.

The only thing is the managers of some of the branches are simply not monitoring the progress of the loading, are regularly failing to control the way in which the assignments are being fulfilled, and are not taking prompt measures to correct the situation rapidly.

Especially alarming are the disruptions of the plan for shipment of the most important freight, the products on which the successful functioning of the entire national economy depends to a significant degree. The first six months of the year showed a deficit in the shipment of coal, timber, and mineral fertilizers.

Fulfillment of the plan for shipments, especially of critical goods, is directly dependent on the level of organization of the operational work and the rapid movement of the flow of trains. The amounts of train traffic and delivery of cars at the junctions, as prescribed by the plan, must be unconditionally fulfilled. Disruption of the assignments sets up barriers in the path of the trains. Serious difficulties have now arisen on the southern run of the South Ural Railroad through the fault of the Kartalinskiy, Orsk, and particularly the Orenburg branches, also, the Chelyabinsk-Kuybyshev line.

On a number of branches of the Gor'kiy Railroad an obstacle has been placed in the way of trains proceeding from the east. The board listened to explanations from the chief of this road, M. V. Vasil'yev. He and the managers of the branches were ordered to take the most decisive measures to correct this situation as rapidly as possible, to provide for unimpeded movement of the trains, and to organize efficient operation and repair of the locomotives.

Substantial difficulties have arisen on a number of branches because of the insufficiently dependable work of the locomotives. There is a great deal of spoilage en route and many stops for unplanned repair. A particularly unsatisfactory situation has developed on the Chu branch (branch chief T. Baru). At the Chu depot (hard by the branch, so to speak) half of the vehicles are being operated with above-norm runs between repairs and many are sent on a trip with one or even several disconnected traction engines. The layover in repair here has become considerably greater and the quality of the repair is clearly unsatisfactory. Instead of taking effective measures and improving the organization and technology of the work and helping to recruit skilled repair workers, the branch and the administration of the road are constantly replacing the depot managers.

Recently the minister issued orders which call for a complex of measures designed for a fundamental improvement in the organization of repair of the locomotives and cars. Strict and general fulfillment of the requirements of these orders will enable us to guarantee dependable operation of the rolling stock on the line, to eliminate the issuance for the train of electric and steam locomotives with malfunctions, and to put a stop to the practice of transferring from branch to branch and from road to road cars which are not suitable for loading--a practice which inflicts great loss on the state.

Serviceable tracks are an important requirement for efficient and uninterrupted operation of the transport conveyor. However, because of serious deficiencies in the organization of current maintenance and repair of the rails we have to issue a large number of warnings about reducing speed and we have had an increase in instances of rolling stock getting off the rails. At the Astrakhan branch (Comrade Kharitonov, chief) there are 106 warnings in effect, although the schedule calls for 17. In sectors with a total length of about 200 kilometers the track is not being maintained in a satisfactory condition. At the same time, the powerful equipment on hand, including VPO-3000 machines, levelers, and electric ballast machines, are being used in extremely poor fashion.

There are many instances of inefficient work at the "window." As a result there have been major disruptions in the train traffic. At the same time, in this important endeavor there are some whose example should be followed. At the session

of the board it was shown how thoughtfully and extremely efficiently the track repair work has been organized by the chief of the Yerevan branch, A. A. Kandil'yan.

Now, when the transport process is being carried out under difficult conditions and the traffic is very intensive, we should not for one minute forget about the safety of the movement of trains. It must be guaranteed without fail. Errors in this work generate very troublesome consequences. Here is a typical example. An investigation of instances of a break in the axis pin on a car of Ufa-Moscow train No 39 showed that the repair at the Ufa depot had been done wretchedly. The defect detector which is used for checking the interior ring of the bearing (it may have disintegrated) was unserviceable. The documentation on monitoring the condition of the defect detector and the record of repair of the roller bearings were ignored at the depot. The technical training in the shop was carried out on a random basis. In 1980 and 1981 the workers of the railroad car operation and service section did not check the wheel and roller shop. It's true that the chief of the railroad car division was there in February. But he gave his attention only to dirt and dust. The break in the pin could have been prevented by the car conductors. But the signals concerning the heating up of the axles were switched off by the conductor and the electric installer en route; they thought it was giving off false signals. In the conductor's reserve the educational work was carried out very poorly and many of these workers had no knowledge of even the most important directives of the ministry with respect to traffic safety.

In summing up the discussion Minister of Railways I. G. Pavlovskiy emphasized the fact that the road sections and their collectives and managers were assigned a very important role. The sections of the roads and their line enterprises are in the forefront of the struggle for fulfillment of the plan of shipments and for more productive and better use of the equipment. How the managers of the branches address themselves to improvement of the organization and technology of the shipments assigned to them by the major administration and the training of the people will in many respects be determined by the rhythmic and uninterrupted operation of our railroads and the quality of the transport services for the economic system and the population. Thus, the managers of the branches have been given the major responsibility for successful solution of the complex problems assigned to the railroads by the 26th Party Congress and by the decrees of the CPSU Central Committee and the Council of Ministers USSR; also, for implementation of the directives of L. I. Brezhnev concerning development and improvement of the work of the steel mainlines.

The transport process, said the minister, is primarily the movement of trains. The specialists, unfortunately, have to be reminded of this common truth, which should be axiomatic for them. Many of the managers of branches and roads sometimes neglect the traffic so that they can resolve personal problems. In short, the norm for the delivery of cars to the junctions is not being fulfilled. In five months, the Rtishchevsk, Penza, Aktyubinsk, Znamensk, Vologda, Izhevsk, Kazan', Murom and Ryazan' branches were 6,000 cars short of fulfilling this norm. In addition, delivery was 1,800 cars a day less than in the comparable period of 1980. Stemming from this are the uneven distribution of the car inventory to the regions of the network, an accumulation of surplus car inventory at some of the roads, and disruption of the structure of this inventory. For some of the chiefs of the branches, a one-two train disruption of the plan for shipments is not a cause for alarm.

But when these deficits are added up, then the, at first glance, small loss becomes a serious deficit. If each of the 185 branches is short two trains a day, then for the network as a whole it leads to a falling off of 20,000 cars in the delivery.

Or take another problem--unloading. We will assume that each branch averages a daily unloading of 50 cars less than the norm. This does not seem like much. For the network as a whole it represents a loss of nearly 10,000 cars. And there are very large balances of cars not unloaded on time.

The minister drew the attention of the managers of the branches to the need to strengthen the cooperation and interrelationships with the freight shippers and recipients; also, the widest dissemination of the work experience of the L'vov railroad workers and the workers of the spur lines of the enterprises of L'vovskaya Oblast, work which recently received the approval of the CPSU Central Committee. We frequently talk and write, I. G. Pavlovskiy went on to say, about a key road, a key branch, critical freight. This is correct and in each case we always single out some chief product. If we are talking about critical goods, then of the total increase of shipments in the current year 95.2 percent consists of coal, metallurgical raw ores, mineral fertilizers, petroleum products, industrial raw material and cement. Because of the general state importance of this freight, the branches which handle the largest volume of shipment of it are in a special situation among us. The ministry is carefully monitoring their work, is giving them all-round help, and at the same time is tasking them with stepped up requirements. Yes, the critical freight is top priority freight. But this does not at all mean that the other products can be neglected. We need to emphasize with special force the fact that fulfillment of the plan of shipments for the entire products list must be an absolute rule for all the branches. Every station must have complete fulfillment of the plan. Only thus can we be sure of normal functioning of all the enterprises and our entire economic system.

Our large reserve is improvement of the use of the carrying and storage capacity of the cars. Suffice it to say that increasing the static load by just 100 kilograms will enable us without bringing in any additional rolling stock to increase the shipments in the last six months of the year by 3.6 million tons for the network as a whole. The average net weight of the train will be increased by five tons. The need for locomotives will be reduced by more than 50 vehicles. However, this reserve is being used inadequately. In the first six months 39 branches did not fulfill the assignment for static load. A number of branches have had a reduction as compared to last year.

The branches where the bulk of the freight is shipped should receive empty cars as a subsidy. These cars are granted subject to the regulation branches. Nonfulfillment of the regulation leads to disruptions in the shipment of goods that are vitally important for the national economy. In the current year 16 branches undersupplied an average of 800 empty flatcars a day from unloading. The ministry requires the managers of the branches to show a state approach to so important and critical a task.

The minister dwelt in detail on the serious deficiencies in the organization of the passenger services. The dissatisfaction of the passengers and their numerous justifiable complaints are generated by gross violations of the schedule, the

inferior quality of the preparation of the cars, and the poor maintenance of them en route, as well as the unsatisfactory passenger services at the stations and in the trains.

The impression has developed that many of the branch chiefs have abandoned this important sector of the work. The standards for the dispatcher apparatus and for the supervisors of the line subdivisions have declined.

The board directed the chiefs of the branches to radically change their approach to the organization of passenger transportation. In the briefest possible time they are to take measures to insure that the trains proceed according to the schedule. The branches and the enterprises must develop a regimen which will not tolerate instances of an indifferent attitude toward passengers and will hold strictly responsible the workers who are to blame when the schedule is disrupted, when inadequately prepared trains are dispatched on a run, and when it becomes necessary to uncouple unserviceable cars en route. It is necessary to intensify the educational work in the collectives of the stations and the conductors' reserves so as to eliminate any instances of a tactless and sometimes even a rude attitude in handling the passengers, instances of concealing available seats, etc.

The board gave a clear exposition of the tasks for fulfillment of the plan of shipments for the third quarter and for the year as a whole. Strict fulfillment of the assignments must become an immutable law for every railroad worker. It is necessary to improve the use of the rolling stock and to maximize the reserves so as to fully and promptly satisfy the national economy and population needs for shipments.

In the second six months of the year there is need to ship daily five percent more freight than last year. And the chief emphasis must be on rhythmic delivery of crucial freight, primarily fuel and metallurgical ore and raw material. Also emphasized should be the establishment of the necessary winter reserves and the agricultural products of the new crop. It is essential to step up the coordination and cooperation with the workers of other types of transport in order to improve the transport of freight from the ports.

The success of all the transport work will be decided by the people. Concern for their welfare and for improvement of the conditions of their labor and life must always be at the center of our attention. There are no trivial things in this endeavor. Every question must be given thoughtful and businesslike consideration with the primary factor being the interests of the railroad workers.

The board expressed confidence that the collectives of the branches of the railroads will be vigorous in using the reserves, will step up the effectiveness and quality of the work, and will obtain unconditional fulfillment of the assignments of the first year of the 11th Five-Year Plan.

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RAILROAD

RESULTS OF CONFERENCE ON PLANNING IN RAILROAD TRANSPORT

Moscow ZHELEZNODOROZHNIY TRANSPORT in Russian No 8, Aug 81 pp 68-70

[Unsigned article]

[Text] The central board of the scientific-technical society of railroad transport and the board of the scientific-technical society of the October system held in Leningrad a scientific-technical conference on problems relating to improvement of planning in railroad transport.

A broad range of questions was discussed at the conference; they dealt both with improvement of planning and rationalization of freight hauls and also with the further improvement of planning work and development of railroad transport. Speakers pointed to the special urgency of the problems under consideration in the light of the decisions of the 26th CPSU Congress, directives and recommendations of General Secretary of the CPSU Central Committee Comrade L.I. Brezhnev contained in the Accounting Report of the CPSU Central Committee to the congress, the decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures for Improvement of Work and Complex Development of Railroad Transport During 1981-1985" and other decisions of directive organs.

Scientists and practical workers of railroads and enterprises are engaged in much work relating to all-round improvement of planning of freight hauling. In accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Raising Efficiency of Production and Quality of Work," the All-Union Scientific-Research Institute of Railroad Transport (VNIIZhT) worked out the most important directions of improving planning of freight hauls while taking into consideration sectorial and regional aspects in all the forms of the plans. The combination of a sectorial system of planning with regional aspects requires the compilation of transport economic balances on the basis of working out of regional balances of production and distribution of the most important forms of production with the participation of Gosplan USSR, Gossnab USSR, ministries and departments and councils of ministers of union republics.

It was pointed out that the adoption in practice of an integrated and balanced system of planning of production, deliveries and hauls of freight is possible only with the development by ministries that dispatch freight and supply-and-marketing organs of a complex of measures for improving planning of shipments on the basis

of transport economic balances for most important types of raw materials, fuel and other products. On this basis, the planned sizes will be determined of consignment and freight turnover; the planning of freight traffic volume and its rational allocation are performed according to types of transport and system network. Realization of an integrated system will require going over from consignment plans to shipment plans with indication of correspondence according to the most important sorts of freight.

The work experience of a number of oblast planning commissions and gosplans of union and autonomous republics, particularly Gosplan of Ukrainian SSR on the compilation of regional material balances on local construction materials using computers, deserves to be noted. The practical use of this experience will make it possible to organize the calculation of such plan balances for most important types of products and of transport economic balances on their basis and also the compilation of planned interoblast correspondences (staggered arrangements [shakhmatki]) according to the corresponding freight schedule especially with respect to coal, ore, metal, cement, timber and grain freight. In their turn, the presence in annual and five-year plan of interoblast correspondences and in annual plans of stations of destination will make it possible to exercise control with the help of electronic computers over the freight traffic on a system network and selection of the shortest routes and to locate "bottlenecks" in the operation of the network at the planning stage and additional resources.

For purposes of annual planning the VNIIZhT calculates transit freight traffic volume on an electronic computer. This problem was solved in connection with the absence of transport economic balances in the preplan period. On the basis of statistical and reporting data of allocation of intersystem correspondences of freight for travel routes with the use of standards showing the share of a route in the total volume of correspondences of two systems, planned staggered arrangements of these correspondences were determined. The correction of standards is done while taking into account deviations of routes from shortest distances, putting into operation of new sections and the use of water routes in carrying out of individual interroute correspondences.

At the present time, a significant volume of work on automation of calculations of transit freight traffic volume has been done with the aid of the first section of an automated system of planning calculations (ASPR); the results serve as a basis for determining the volume of freight turnover, size of traffic, required throughput capacity of branches as well as runs of railroad cars and locomotives. An analysis of the calculations shows that on the whole general receiving and turning over of freight for railroads correspond to the developed dimensions of freight operation. But in allocation of freight according to kind and junction points, significant deviations are observed. This is to be explained first of all by the lack of reliable plan correspondences, making it difficult in the correction of standards of traveled routes and the calculation of freight traffic volume on the basis of obsolete normative data. For this reason, a need exists for conducting work on determination of plan correspondences of deliveries of products based on the data of transport economic balances.

Personnel of the Tashkent Institute of Railroad-Transport Engineers (TashIIT) are also engaged in questions of improving the planning of freight hauls. The problem is considered from the point of view of scientific validation and balance of all

plans and the most efficient allocation of deliveries and shipments among the different forms of transport. It is important for ministries in the process of developing the five-year plan to determine interblast correspondences of freight traffic volume, while the freight turnover and dispatching of freight with indication of the most important should be determined not only by the Ministry of Railways but also by Gosplan USSR, ministries and departments as well as supply-marketing organs. It is also important that they provide transport organizations on the basis of the corresponding schedule of freight the plan of shipments for the five-year period broken down by years with an indication of staggered arrangements of freight correspondences.

At the Dnepropetrovsk Institute of Railroad-Transport Engineers (DIIT), research is being conducted on efficient allocation of shipments among the different forms of transport on the basis of reports for working out transport economic balances. On the basis of the fact that the optimum level of a shipment plan can be achieved through unified planning of the operation of all forms of transport, a model was created that provided for securing an optimal plan with the best possible use of each form of transport. Calculations made for the Odessa transport hub disclosed 53 short-run correspondences of which 15 could be advantageously turned over to motor transport. It is most advantageous to use motor vehicles for the hauling of cement, petroleum products, foodstuffs, ferrous and nonferrous scrap metal within limits of 7-28 km.

At the same institute, work was done on planning of shipments on the basis of regional material balances on the example of iron ore shipments. For ensuring the balance of production and shipment plans within Ukrainian SSR together with the UkrSSR Ministry of Ferrous Metallurgy, the Pridneprovsk system and the VNIIZhT are conducting an experiment on the use of regional balances in the planning of iron-ore shipments. For shipping an ore-concentration combine and for arrival a metallurgical plant are employed as a territorial unit for the forming of a material balance. For material balances and data on ore requirements by each plant, transport economic ties are established with designation of input and output stations and an analysis is made of their efficiency; in addition the volume and direction of ore freight traffic volume within the region are determined. All this confirms the advisability of using regional material balances for working up of transport economic balances as bases of planning freight shipments and ensuring their balance with respect to production plans.

A number of railroads are doing a great deal of work together with transport VUZ's on rationalizing of shipments. Engineering and technical personnel of the October system and research workers of the Leningrad Institute of Railroad-Transport Engineers (LIIZhT) are devoting a great deal of attention to the disclosure, analysis and rationalization of short-run hauls. Calculations show that it would be possible to transfer to motor transport about 2.4 million tons of different forms of freight with yearly economic savings of one billion rubles of presented outlays.

Here research is being done on determination of freight transported over a distance of up to 200 km and working out of rational schemes of its transportation with technical-economic validation of the feasibility of shifting the shipments over to water and pipeline transport. Schemes have been developed of normal directions for a number of petroleum products. According to calculations, reduction of freight turnover according to optimal plans for three grades of gasoline compared to actual

will amount to more than one billion ton-kilometers and savings through the reduction of the average shipment distance by 32 km--to more than 4 billion rubles. Murmanskaya Oblast can be used as an example of work done on the effectiveness of combined railroad and water shipments. It has been estimated that the annual economic effect from the use of combined shipments of apatite and iron-ore concentrate compared to the railroad version amounts respectively to 1.5 rubles and 1.7 rubles per ton.

The Khar'kov' Institute of Railroad-Transport Engineers (KhIIT) is engaged in the improvement of planning and rationalization of shipments of prefabricated reinforced concrete and power-plant coal. This is no accident as in Ukrainian SSR production of prefabricated reinforced concrete will reach 40 million cubic meters in 1985. Bureaucratic isolation of enterprises of the construction industry is responsible for a large number of inefficient hauls. The proposals developed at the KhIIT, especially on combining freight into groups while taking into account use characteristics and interchangeability, the ban against importing prefabricated reinforced concrete from regions and republics will make it possible in the immediate years ahead to reduce transport expenditures by 50-60 million rubles and to free several thousand railroad cars for the hauling of other freight.

For the reduction of counter shipments of coal, the advantageousness has been proved in the Donbass of making a careful study of qualitative indicators of power-plant coal and of the capacity and technology of concentration and on this basis while taking into account the transport factor the compilation of intrasystem optimal schemes of shipments of ordinary coal in the framework of mine--concentration factory.

Fruitful work is being done at L'vov system on rationalization of shipments and compilation of schemes of intraroad directions of freight traffic volume. There has been developed in particular a clear-cut system of control, recording and elimination of inefficient hauls; transport economic connections are being studied for coal, petroleum products, sugar beet, machines and equipment, lumber and construction freight. Scientific research is being conducted in association with the DIIT. As a result, in the 10th Five-Year Plan there were turned over to motor transport 159,000 tons of freight more than was initially expected.

In 1980, inefficient shipments of coal, cement, scrap metal and other freight were reduced by 2 million tons on the Western Siberian system. This is a major contribution by the personnel of the freight service, the Novosibirsk Institute of Railroad-Transport Engineers (NIIZhT), who work in cooperation with the oblast's industrial enterprises, with river and motor transport and others. The further improvement of the effectiveness of rationalization of shipments would require the solution of a number of organizational problems. In particular, it would be necessary to spot inefficient shipments at the stage of planning (five-year, annual, quarterly) and to point out in annual announcements interoblast correspondences. It is necessary to solve the question of assignment of interoblast correspondences (staggered arrangements) to shippers together with drafts of annual plans; to separate out expenditures for hauling of freight in reporting and plan documents for production output, which would cause shippers to establish more efficient operational connections.

The basic direction of work on rationalization of shipments on the Sverdlovsk system has been improvement of transport economic ties and improvement of operation with motor and river transport. At the same time, special attention is being paid to timely correction and inclusion of changes in existing schemes of normal directions of freight traffic volume. The normative reference information for all types of freight of the present collection of schemes was turned over to the computer center, which aids in the detection of inefficient hauls during the planning process. As a result of this work, 910,700 tons of freight were turned over to water transport and 1,340,100 tons--to motor transport.

During the 11th Five-Year Plan, work on rationalization of shipments on the North Caucasus system will be carried out in close cooperation with motor and river transport and with the active participation of kray, oblast and republic commissions for the coordination and planning of the work of different forms of transport. By 1985, it is planned to have turned over more than one million tons of freight to other forms of transport. The Tuapse and Caucasus branches will turn over 135,000 tons of short-run shipments with an economic effect of 65,000 rubles.

In the problem of rationalization of shipments, an important place is occupied by the problem of rationalization of deliveries. The TashIIT is engaged in improving the management of material-technical supply of railroad transport (on the example of the Central Asian system). Calculations show that rationalization of deliveries by the railroad of only three groups of material resources would make it possible to reduce the volume of shipments by 3 million ton-kilometers and procurement-warehousing expenditures by the sum of 240,000 rubles.

A number of reports and communications at the scientific-technical conference dealt with topical problems of improving planning of work and developing multisectorial services of railroad transport. Corresponding work is also conducted at sectorial scientific-research and educational institutes, on railroads and at enterprises and at many creative organizations of the scientific-technical society.

Interest was expressed in the work done by the Moscow system on mutual coordination of plans for the different levels of management of operational activity (system-branch-enterprise). The proposals are based on the need of observing the interests of all enterprises and organizations, systems and branches, a clear-cut purposefulness of plan and cost-accounting indicators for attaining high end results from the work of a given enterprise, the creation of a normative and methodological base for long-range planning of the work of branches and line enterprises, the development of a well-balanced system of planning, analysis and accounting of return on investment and so on.

The Southeastern system has developed proposals for improving planning of labor and capital investment. In particular, a plan is recommended for the size of the contingent to be established on the basis of calculations according to norms of labor outlays and not according to an achieved base following examination of these outlays. In taking into account the importance of adoption of the Shchekino method for boosting of labor productivity, it is proposed to leave in the plan of systems, branches and enterprises a wage fund for the contingent that is released from combining jobs.

System personnel propose to simplify the system of planning of capital investments, examining on the level of the Ministry of Railways and the Ministry of Transport Construction only large items costing more than one million rubles. It is also proposed to speed up in planning the compilation of a definitive capital-investment plan through the reduction of technical work.

Research workers of the VNIIZhT are actively working on the problem of improving capital-investment planning. Under current condition, they select as a decisive condition all-out increase of integration and proportionality in conducting of work connected with the growth of throughput and carrying capacity of lines. These objectives are to be served by long-term (10, 20 years) and medium range (5 years) planning of the new capital-investment section of the plan, which will contain indicators for the start-up of production capacities, fixed capital and outlays for the most important directions of the network.

At the Rostov Institute of Railroad-Transport Engineers (RIIZhT), a complex goal program has been developed for the development of the region's railroad-transport system. The system of operational management of the program is intended to provide for a tuning of the operated system for a selected trajectory of program development. It is a combination of organizational structure of operation and of organizational economic methods of management.

At the RIIZhT as well as at the Kuybyshev Institute of Railroad-Transport Engineers (KIIT), studies have been done on improvement of planning and economic validation of development of the repair base of locomotives. Research workers of the RIIZhT propose in particular a version of specialization of plants for the repair of one series of electric locomotives. In this connection, economies from the introduction of the flow method of repair on the basis of the latest equipment for mechanization and automation of production processes will significantly exceed the increase of expenditures for sending locomotives to be repaired. Average annual savings solely of current outlays for plant repair of electric locomotives should amount to approximately 3 million rubles as a rough estimate.

Research workers of the TashIIT have devoted their work to the improvement of planning and organization of passenger transportation. They recommend a revision of the system of selling tickets through the creation of special ticket offices where tickets could be procured for all forms of transport. It is likewise proposed to arrange for the sale of through route tickets with indication on them of the route to be taken, points of change from one form of transport to another or within a given form of transport, numbers of the trains, cars, runs and places. At the same time it will be necessary to develop coordinated schedules of movement on the different forms of transport.

The VNIIZhT has completed a study on improvement of planning of operational expenditures and the LIIZhT—a study of revenues from shipments. It was pointed out that even at the present time it is possible to significantly raise the level of planning of revenues, using for railroads amalgamated revenue rates for groups of freight and forms of communication and for branches—accounting prices for each operation of the hauling process. As for revenue forecasting, it is recommended for this purpose that methods of correlation analysis be used.

Scientific workers of the VNIIZhT have completed a large volume of work on creation of automated systems of planning calculations. Procedures have been developed for annual planning of freight turnover and passenger turnover, planning of indicators of use of rolling stock, labor, operational expenditures and calculation of freight traffic volume. A scientific conception has been developed for the creation of the automated system and its structure and principles of operation, the composition of the data base has been prepared and a system of control of these bases on concrete information for the setting up of an automated data bank for the aforesaid system within the system of control of the entire sector.

The electronic computing equipment at the South Ural system is finding increasingly broad application for the solution of diverse planning problems. There has been developed in particular a "road dispatcher" system of providing effective planning and regulation of train operation on the proving area of the system and branches in a continuous region for a period required for the planning of transfer of trains at junction centers. The system is being operated on an experimental basis; it makes it possible to plan and follow the movement of each train and special rolling stock.

A procedure has been proposed at the LIIZht for the compilation of a descriptive document of a line enterprise that would reflect the existence and capacities of technical equipment, the level of organization of production, economic and financial indicators, labor resources, questions of social development of the collective, including over the long term, and others. It is proposed to compile the document from eight amalgamated sections. Compilation of such documents for all line enterprises should significantly boost scientific validity of planning and efficiency of production.

Useful experience in control of quality of labor and production has been accumulated at the Leningrad-Sortirovochnyy-Moscow Station. The complex system of quality control is based on broad standardization of different production processes and cycles. All of the 15 standards of the station regulate the remuneration and organization of the labor of workers of different subdivisions, shifts, sections and brigades as well as the procedure and consistency of performance of technological operations. A system of marks has been established for the quantitative evaluation of the quality of labor of workers according to standards. In the two years of use of the system of control of quality at the station there has been observed a stable tendency for the improvement of the most important indicators of its operation. Thus, railroad car downtime in 1979 and 1980 was reduced respectively by 0.8 and 0.9 hours.

Research personnel of the KIIT are working on the solution of problems of protection of the environment in planning. Recommendations have been provided for protection of the air, for planning of construction of purification structures, clean-up devices, creation of sanitary protection zones and the like. At a number of enterprises thermocatalytic reactors for cleaning of industrial gases developed at the institute are being successfully used.

The conference showed the big interest of the scientific-technical community in problems of further comprehensive improvement of planning for railroad transport,

which will contribute to the successful solution of major and complex tasks set before the sector's workers. Corresponding recommendations were adopted at the conference. There participated in its work representatives of scientific-technical societies of Bulgaria, Hungary, the German Democratic Republic and Czechoslovakia.

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OCEAN AND RIVER

PROGRESS REPORT ON 1981 RIVER TRANSPORT PLAN

Moscow RECHNOY TRANSPORT in Russian No 8, Aug 81 pp 1-2

[Editorial: "Fulfill the 1981 Plan!"]

[Excerpts] Having begun a broad socialist competition, the river transport workers of the Russian Federation are making considerable efforts to fulfill the planning assignments of the first year of the 11th Five-Year Plan. The enthusiasm and the labor upsurge elicited by the historic decisions of the 26th CPSU Congress are already being embodied in concrete deeds.

Despite the difficult hydro-meteorological conditions which held back the development of the navigation season and the difficulties in passing ships through the Cheboksary hydro-engineering complex which were caused by the construction of new locks, the river workers of the Russian Federation fulfilled their half-year plan for shipments by 101.5 percent and for freight turnover by 100.3 percent. Compared to the corresponding period last year, in the ministry as a whole 11.8 more million tons of freight was shipped with a freight turnover of 6.7 billion ton-kilometers. Cargos were delivered along small rivers to points deep within the country on time and in full, and the transporting of cargos to Western Siberia, the Far East, and Far North was improved. The established targets for the shipment of petroleum products, timber, and dry cargos were met. Compared to the corresponding period last year, the economy was supplied with more goods as follows: grain--25.6 percent, combined feeds--5.9 percent, salt--5.2 percent, coke--25.9 percent, timber in ships--4.4 percent, construction cargos--9.8 percent, non-ferrous ores--48 percent, ferrous metals--19.6 percent, chemical and mineral fertilizers--8.8 percent, cement--3 percent, industrial raw materials--1.1 percent, and chemical cargos--45.3 percent; container shipments increased by 4.9 percent. Compared to last year, loading and unloading work in ports increased by 6.7 percent, and 10.5 million tons of above-plan cargos were processed during the half year. During this navigation period more than 39 million passengers were hauled.

Fourteen steamship companies fulfilled their planning assignments for freight shipments and turnover. Positive results were achieved by the collectives of the Moscow, Kama, Bel'sk, Vyatsk, Volga-Don, Kuban', Pechora, Western, Irtysh, West Siberian, and the Amur and Lena United steamship companies.

Along with this, as an analysis shows, there are shortcomings in a number of steam-

ship companies and reserves are not being fully utilized.

During the first half year plans were not fulfilled as follows: for total shipments and freight turnover--the collectives of the Northern and Sukhon steamship companies; for total shipments--the collectives of the Northwestern and Belomor-Onega steamship companies; and for freight turnover--the "Volgatanker" and the collective of the Volga United Steamship Company. In the ministry as a whole, plans were not fulfilled for freight shipments in mixed railroad-water and international communications.

There have been serious shortcomings in the use of the transportation fleet: certain steamship companies did not fulfill their planning assignments for gross productivity.

In a number of ports ships and railroad cars were not processed on time. During April-May alone above-plan idle time by the transit fleet under processing came to more than four million tonnage-days. There were large amounts of idle time by rolling stock at the Gor'kiy, Yaroslavl, Kotlas, Perm', Cherepovets, Cheboksary, Tol'yatti, Tobol'sk, Tyumen, Omsk, Novosibirsk, Krasnoyarsk, and Yakutsk ports. Substantial losses of fleet capacity were permitted in individual steamship companies through above-norm idle time by ships under repair.

These and other shortcomings testify to the large reserves whose realization will make it possible to increase shipment rates.

In August of this year the Board of the Ministry of the River Fleet considered the results of the branch's work and define the tasks for the remaining part of the navigation period. The leaders of the ministry's chief administrations, steamship companies, basin administrations, and canal administrations have been ordered to direct organizational work toward increasing shipments and improving the use of the fleet. The chief attention of all of the workers of the fleet and shore has to be concentrated on realizing the measures approved by the Board which will ensure a decrease in all types of lay time by ships, their fullest workload, and the creation of safe sailing conditions.

The third quarter--the most responsible period of the navigation season--is now in progress. It is during this period that the fate of the fulfillment of the navigation plans and socialist commitments of the first year of the 11th Five-Year Plan by all of the labor collectives in the branch as a whole has to be decided. During this period the river transportation workers of the Russian Federation have to increase freight shipments by almost 13 million tons and freight turnover by 7.4 billion ton-kilometers compared to the corresponding period of last year. The plan provides for an increase in the amount of shipments of petroleum products (1.7 percent), timber on rafts (5.9 percent), dry cargos (5.9 percent), including grain (28.4 percent), combined feeds (21.5 percent), timber in boats (8.2 percent), hard coal (1.1 percent), and construction cargos (5.2 percent). International freight shipments are to increase more than 11 percent. There is to be a substantial increase in freight turnover in the Volga United, Kama, Bel'sk, Volga-Don, Northern, Pechora, Irtysh, West Siberian, Yenisey, East Siberian, Amur, and

the Lena United steamship companies.

Especial responsibility for increasing shipments rates is being placed upon the collectives of the steamship companies of the eastern basins, since the needs of the economies and populations of Siberia, the Far East, and the Far North for transportation services by the river fleet are being far from fully met. The river workers of the West Siberian, Irtysh, Yenisey, and Lena United steamship companies have to make maximum efforts so as to ensure during the remaining period of the navigation season the delivery of all planned freight to the petroleum and gas extracting areas of Tyumenskaya and Tomskaya oblasts, for the Noril'sk Mining and Metallurgical Combine and for the enterprises of the Yakutsk SSR and the Far North.

The punctual and high quality delivery of the new harvest output is a highly important task of river workers, and above all, of the collectives of the steamship companies of the central and northwestern basins. During the third quarter it will be necessary to ship around three million tons of grain and the new vegetable and melon harvest. In order to maintain an efficient rhythm in the transportation conveyor during the period of the mass harvest, river workers together with procurement workers have to exercise daily control over the fulfillment of the shipment schedules for grain and other agricultural output and ensure the punctual processing of ships and trucks at loading and unloading points.

Substantial reserves for increasing the efficiency of the transportation process have to be put into action by port collectives by means of decreasing lay time by the fleet under processing on the basis of an extensive introduction of a continuous intercoordinated planning system for the operations of rolling stock.

A large amount of attention has to be devoted to carrying out the decree of the CC CPSU "On the Work Experience of the Collectives of Railroad Transport and Industrial Enterprises of L'vovskaya Oblast on the Efficient Use of Railroad Cars." This decree has a direct relationship to ports which transfer freight from the railroad to water and back. The plans for mixed railroad-water shipments frequently are not fulfilled because railroad cars are delivered to the transshipment ports late. And frequently port workers are responsible for above-plan idle time by rolling stock when it is being processed. The experience of the L'vovskaya Oblast railroad workers and industrial enterprise collectives testifies to the fact that it is possible to achieve a substantial decrease in transportation costs in the economy on the basis of the introduction of a broad complex of measures to employ advanced methods of loading and unloading operations, develop and maintain in good working order railroad sidings and transportation works, and ensure the full use of the capacity of railroad cars and strict compliance with the requirements for maintaining and cleaning them.

Efforts must be redoubled in navigation repairs on ships. The steamship companies' industrial enterprises have to ensure reliable work by the fleet and maintain it in good operating order.

The way workers play an important role in increasing the efficiency of shipments. The capacity of the transportation fleet depends upon the working conditions on rivers. For this reason, the collectives of the basin administrations of ways and canals

have to improve the maintenance of sailing conditions, maintain the guaranteed dimensions for the way, and pass ships without hindrance through locks.

An extension of the navigation period is of great importance for the successful fulfillment of the planning assignments and socialist commitments. In addition to ensuring high shipment rates, the steamship companies together with the basin administrations for ways and canals have to realize a complex of organizational and technical measures on preparing ice-breaker equipment, the transportation fleet, the ports, and hydroengineering installations for operations during freezing temperatures.

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OCEAN AND RIVER

USE OF LARGE-CAPACITY FORMATIONS EXAMINED

Moscow RECHNOY TRANSPORT in Russian No 8, Aug 81 pp 4-5

[Article by A. Sazonov, senior scientific associate at the Gor'kiy Institute of Water Transportation Engineers, and V. Mukhortov, chief of the fleet shipment and traffic service of the Moscow River Steamship Company: "The Possibilities For Using Large-Capacity Formations"]

[Text] The waterways of the Moscow Steamship Company are characterized by great diversity which makes it difficult to choose an optimal type of fleet and effective schemes for the organization of the operation of formations. The steamship company is taking measures to solve these problems. Certain successes have been achieved; however, research which has been conducted by associates from the Gor'kiy Institute and the steamship company has shown that there are still large unutilized reserves for increasing the efficiency of fleet operations, especially in shipments of mineral and construction materials.

In September 1980 at the Ivan'kov reservoir and the canal imeni Moscow tests were carried out on loaded large-capacity formations: Kil'vater ones consisting of two barges of design NO. 461B and one barge of design No. 461D with a "Volgar'-24" pusher of 440 kilowatts (captain A.I. Balashov). With an immersion of 335 centimeters the freight mass in the first formation came to 6,280 tons, while with an immersion of 360 centimeters it was 3,800 tons in the second one. A formation "loaded and unloaded" consisting of two barges of design No. 461B was tested with a 590-kilowatt OTA-895 pusher (captain V. Ye. Kolkachskiy). With an immersion of 360 centimeters the freight mass in the formation was 7,000 tons.

The tests showed that in the canal the speed of the loaded formations was 9.3-9.6 percent and of the unloaded ones 8-8.4 percent lower than in the reservoir. In order to decrease yawing stern stabilizers have been installed on most of the barges operated in the Moscow Steamship Company which at the same time reduce speed by 15-17 percent. The barges of design No. 461B in which mineral and construction materials are hauled have an increased wear and tear level as a result of the difficult operating conditions in the canal. As a result, water gets into the spaces between the bottoms and this decreases the freight capacity of the formations. In addition, in the North port formations are unloaded without being cleaned and part of the cargo remains in the hold. All of this leads to an under-

utilization of the freight capacity of formations.

The tests also showed that the formations possess good stability in the reservoir and in the canal on condition that they move along an axis. When they deviate from this axis there is a substantial increase in the ardency of the formations, especially loaded ones, when they are moving at full speed. This fact has to be considered by helmsmen when encountering other vessels. In order to decrease ardency they should decrease the speed of the formation.

In performing the "snake" maneuver it became clear that a loaded kil'vater formation consisting of two barges of design No. 461B and a "Volgar'-24" pusher reacts poorly to a deviation of the propeller nozzles. With a deviation of five degrees the formation begins to turn in a assigned direction in 80 seconds. With an increase in the angle of the nozzles by 15 and 20 degrees this time decreases to 30 in 10 seconds. In order to hold the formation on an assigned course with a broad side wind and full speed it is necessary to make corrections for the wind by means of putting the nozzles at the required angle.

Formations consisting of two barges of design No. 461B with 440-kilowatts pushers (design No. P45V) can be permitted for operations in the canal only with sufficient dimensions for the navigable way and with a definite wind-wave regimen.

In movement along the canal the braking time for loaded formations decreases by 13-15 percent and for unloaded ones by 30-35 percent, while the braking path decreases by 1.8-2 times.

In the process of the experiment a time study was also made of the round-trips of a formation consisting of two barges with a freight capacity of 2,800 tons and with a 590 kilowatt pusher on the Fedorovskoye Northern Port line which is 141 kilometers long, and of a formation consisting of one barge of design No. 461D with a freight capacity of 3,800 tons and with the same pusher on the Fedorovskoye Pavshino line which is 155 kilometers long. The data which was obtained showed that the total lay time of the formation consisting of two barges of design No. 461B came to 57.2 percent, and of the formation of one barge of design No. 461D--52.3 percent, however, the technical and economic indicators of the first formation were better than that of the second one.

The basic reason which makes it necessary to operate one-barge formations on the Fedorovskoye (Mouth of the Soz' River) --Pavshino line is the small radius of the navigable paths (200 meters) at lock No. 8 of the Canal imeni Moscow--Pavshino.

On the basis of the indicators which have been obtained, the conclusion can be drawn that the most effective on the Mouth of River Soz'--Pavshino line are formations consisting of a barge with a freight capacity of 3,800 tons and a pusher with a capacity of 440 kilowatts of design No. R45V. With freight shipments on such formations the specific adduced expenditures are lower by 10.7 percent and labor productivity and traction higher by 47.5 and 21.3 percent than in formations consisting of the steam barge with a pusher of 590 kilowatts of design No. 758 AM. The operation on this line of formations consisting of a barge with a freight cap-

acity of 3,000 tons of design No. 461G and a pusher of 330 kilowatts of design No. 908 is more effective than formations 590+1x3,800.

Since at the present time the existing pushers of design No. B45V are insufficient to fully provide for the freight flow, the temporary driving of barges of design No. 461D can be performed by pushers of design No. 758-AM by increasing the work load per unit of capacity of the pushers through including in the formation an additional barge with a freight capacity of 18,000 tons. The adduced expenditures with shipments and such formations are 10.6 percent higher than in formation 440+1x3,800, and 5.2 percent lower than in formations 590+1x3,800. In addition, it must be noted that the plan for the organization of the work of such formation is changing. A formation consisting of two loaded barges moves from the loading point to the Northern Port where a barge with a freight capacity of 1,800 tons is unloaded, while the formation goes on to Pavshino with the other barge. On the return trip the barge which has been unloaded during this time in the Northern Port is moored onto the formation and the entire formation proceeds to the loading point. As pushers of design No. R45V with a capacity of 440 kilowatts come into the steamship company they have to replace pushers with a capacity of 590 kilowatts.

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OCEAN AND RIVER

RIVER TRANSPORT URGED TO INCREASE EFFICIENCY

Moscow RECHNOY TRANSPORT in Russian No 8, Aug 81 pp 20-21

[Article by I. Baranov, deputy chief of the Northwestern Steamship Company, and A. Mazo, chief of a scientific labor organization laboratory: "To Improve the Efficiency and Quality of Work."]

[Text] Strenuous tasks have been set in the 11th Five-Year Plan for RSFSR river transport in more fully and punctually meeting the needs of the economy and the population for shipments. Its freight turnover is supposed to increase by 19.8 percent. All of the most important directions in the work of river transport are also stipulated in the economic and social development plan of the Northwest Steamship Company.

Whether an economy is to be really economical depends to a large extent upon how stabilized or decreased the transportation costs per unit of industrial and agricultural output are. As a result of this, the further development of transportation associations, one of which is the Northwest River Steamship Company, has to occur basically on the basis of an intensification of the use of fixed productive capital, the preponderate part of which is made up of the fleet, and of an improvement of the use of material, financial, and labor resources.

A long-term program has been developed in the steamship company which makes it possible to increase the volume of shipments on the basis of an efficient use of the fleet. An increase in the gross productivity of its operations is the chief direction for increasing labor productivity and decreasing the cost of shipments. In 1981 alone the increase in the gross productivity of fleet operations is supposed to come to 6.1 percent compared to 1980.

Shipments by this same fleet will increase during the five-year period by 900,000 tons on the basis of involving freight in ~~underwater~~ directions and of incoming freight. It is planned to decrease fleet lay time in the ports in 1985 by 15 percent compared to 1980 as a result of a 16 percent increase in the intensity of freight work, and an 18 percent increase in technical and technological operations preceding freight work, and after freight work 7 percent.

The increase in the intensity of freight work will follow many directions.

At a number of docks shipping technology is changing. Thus, in the loading of

sand, instead of floating five-ton cranes, it is planned to use hydraulic dredging, which will make it possible to increase labor productivity by two times and more. In order to decrease idle time by self-propelled large capacity ships engaged in shipping sand from the Gulf of Finland a hydro-reloader is being refitted; this will make it possible, when warehouses are not prepared to accept sand, to unload it into seagoing self-propelled barges which will subsequently be tugged to other warehouses. It is planned to continue to increase the proportion of freight which is processed by hydro-machinery from 87.4 to 93 percent.

During the five-year period the length of the steamship company's mechanized docks is supposed to increase by 40 percent. A large amount of construction and renewal of the docks of our clients is planned. The Cherepovets Chemical Combine will begin to ship output from its own docks, and docks will be built at the Cherepovets Metallurgical Plant, the Izhorsk Plant, and others.

A large program has been mapped out to improve the entire system of overall fleet services which provides for reducing fleet idle time in ports, at roadsteads, and en route. (Today this idle time in the steamship company comes to almost seven percent of the total expenditures of the transportation fleet.) The basic directions of this work are a maximum doubling up of service and freight operations (it is planned to bring the coefficient of doubling up to 60 percent); and an increase in the number of ships which are serviced non-stop from 26 to 39.5 percent.

It is also planned to further develop the network of BPU /shore-based production units/. The fulfillment of the projected program for improving the system of overall services will make it possible for the steamship company to increase labor productivity in shipments by 1.4 percent and to decrease their cost by .8 percent.

A number of measures have been mapped out in the plan to increase the planned workload of the cargo transport fleet. Thus, the load of ships of design Nos 507 and 1565 which carry mineral-construction materials to the center of the country will be increased to 5,300 tons, while with timber it will be no less than 4,600 tons. An increase in the workloads of the ships of design Nos 791, 2-95, and 576 is planned.

There has to be a further improvement of way conditions for the operation of the fleet.

As a result of the existence on the Cherepovets-Leningrad waterway of locks, sectors with increased windiness, and one-way traffic, the technical speed of the self-propelled fleet is almost half that of the passport speed. Solely from traffic on restrictive sectors fleet losses are fixed at a magnitude of almost 7.5 million tonnage-days. An increase in way conditions on these sectors will make it possible to obtain additional transport output of no less than one billion ton-kilometers and to increase labor productivity by almost six percent. The steamship company together with the Administration of the Volga-Baltic Water Way imeni V.I. Lenin has worked out organizational and technical measures to speed up the passage of ships; in particular, before 1985 it is planned to remove restrictions on sectors with a total length of 25.7 kilometers, which will make it possible to release not less than one million tonnage-days for shipments.

Idle time by the transport fleet waiting for the Neva bridges to be opened has reached impressive proportions and has a tendency to continue to increase. According to our calculations, the introduction of a laser system of conducting the fleet through the Neva bridges will make it possible to decrease fleet idle time by no less than 900,000 tonnage-days and to obtain an annual economic effect of 960,000 rubles.

The realization of the complex of measures to increase the efficiency of the use of the transport cargo fleet will make it possible for the steamship company to ensure an increase in labor productivity of no less than five percent.

A large program has been planned to further improve the organization and management of the shipping process. A number of local lines are being shifted to work by schedule; and for the first time the sector Nizhnesvirskiy lock-Leningrad bridges which has a length of more than 250 kilometers will have dispatcher regulation of ship traffic in order to reduce to a minimum the waiting time at the Nizhnesvirskiy lock which occurs as a result of heavy traffic after the opening of the bridges. Single-through dispatcher shifts are being introduced at many sectors from Cherepovets to Leningrad.

The development and improvement of the work experience of Leningrad transportation workers which was approved by the CC CPSU is a very important direction in the work of the steamship company. As a result of three years of labor collaboration based on the introduction of a continuous planning system and reinforced by overall socialist competition, 26,116,000 tons of freight have been moved from the railroad to the water, more than 3,000,000 tonnage-days and 3,000 railroad car-hours were economized, and an economic effect of 1,300,000 rubles was obtained.

The experience which has been gained is making it possible to introduce a continuous planning system and inter-basin shipments of timber from the Volga-Balt to Moscow and to the Volga, iron ore concentrate from Kandalaksha to Cherepovets, and apatite from Medvezh'yegorsk to Cherepovets with the participation of freight shippers, freight receivers, and related steamship companies. This task is a difficult but realistic one, and the steamship company will begin to carry it out in the near future.

Beginning with the 1981 navigation season the approach of the fleet to ports will be effectively regulated over the entire length of the basin's waterways. This will make it possible to ensure efficient progress by the ships and to decrease non-productive idle time.

A further improvement of the group contracting work method which has been developed and introduced in the steamship company will promote a substantial increase in labor productivity. The essence of this method consists in the fact that an agreement is concluded between the collective of the crews of a group of ships assigned to an overall line and the shore workers in accordance with which the crews commit themselves to fulfill on schedule and with high quality the transportation work plan established for the ships, to achieve a decrease in the cost of shipments and an increase in labor productivity. A system of material stimulation has

been worked out in the steamship company for the fulfillment of a group contract by ship crews and by shore workers participating in the organization of the fleet work of this line. The shore workers and the ship crews are interested in the final result--the fulfillment of additional transportation output with a smaller number of ships.

The realization of the program directed toward improving the organization of the shipping process will make it possible to increase labor productivity by 1.5 percent.

An extension of the navigation period is one of the ways of increasing shipments and labor productivity. In 1981 alone a freight turnover of 407 million ton-kilometers will be carried out during the extended navigation period, and the economic effect will come to 748,000 rubles.

During the current five-year plan the task has been set of making a maximum shift, where this is expedient, of the shipment of freight from railroad to river transport. In 1981 200,000 tons more than in 1980 is to be shifted to the steamship company and for the five-year plan as a whole--more than 4,000,000 tons of freight.

By means of shifting freight to ~~underworked~~ directions it is planned to increase labor productivity by 2.5-2.8 percent.

A further improvement of the operation of river transport is impossible without the development of cost accounting, a strengthening of economic levers, and an improvement of planning. The kind of system of evaluating the work results of the transportation enterprises (ports, plants) has been worked out and introduced in the steamship company which puts these results in direct dependence upon a decrease in idle time and non-productive losses in ports, at plants, and enroute. The role of the indicator of the gross norm of processing has been defined anew. In the past port collectives were given bonuses for fulfilling this indicator. While retaining this, the steamship company has made the amount of the bonus depend upon the extent of the decrease of the average norm. For every percentage point of decrease in fleet processing time the material incentives fund is increased by two percent. This measure has made it possible to decrease processing time for diesel freight ships by one-third in a decade.

A system of material responsibility and incentives has been worked out and introduced for the ports for complying with the normatives for the movement of ships within the limits of their activities and for the fulfillment of the workload norms of ships.

A system of responsibility has also been worked out and introduced for key ports and plants for complying with schedules and quality in overall servicing of the fleet and the floating component. In 1980 material responsibility was introduced for enterprises for extra-plan visits by ships to their bases. A system of fees has been introduced for all types of services in overall servicing.

In connection with the increased amount of ship repairs and the importance of performing them, a volume of ship repairs is defined and established in the plan for

each plant; this indicator has become the basic one in providing bonuses for plant collectives.

In establishing evaluative indicators account is taken of the role of line enterprises (ports and plants) in fulfilling the steamship company's overall indicators. Thus, for the Leningrad passenger port the basic production indicator has become "profits" and on its basis the other economic indicators are performed (labor productivity, cost, and others). For such specialized ports as the Leningrad Western, the Novgorod, and the Pskov ports where primarily sand is extracted and shipped the basic indicator is-- shipment-ready tons.

In establishing indicators it is important to see to it that they are uniform from the steamship company to the crew or the team. A characteristic example of this coordination is the system of voyage-by-voyage planning for ships which sail foreign waters which was introduced for the first time in our steamship company. An evaluation of the work of the ship crews for every voyage increased the responsibility of the crews and of the chief dispatchers for the fulfillment of time norms, for an increase in ship workloads, and for the fulfillment of the economic indicators of every ship on every voyage.

As a result of the work in accordance with the new ship planning system, in 1980 alone the amount of freight shipments was increased by 115,000 tons with a freight turnover of around 250,000,000 ton-kilometers; freight expenditures were decreased by more than 2,000,000 tonnage-days.

Work to improve planning and cost accounting will continue.

An improvement of planning and cost accounting will ensure an increase in labor productivity in the 11th Five-Year Plan of not less than 1.5 percent.

The introduction of advanced methods and scientific labor organization exercises an important influence on increasing labor productivity in shipments. During the 10th Five-Year Plan 64 mixed "river-sea" ships were shifted to the Shchekino method of work with a decreased crew size. In this connection, 164 fleet specialists were released, an economic effect of more than 560,000 rubles was obtained, and labor productivity in shipments was increased by 3.2 percent. At the present time 88 ship crews are working in accordance with this method. During the 11th Five-Year Plan the entire new additional mixed "river-sea" fleet will be shifted to work by the Shchekino method.

At the present time on more than 200 of the steamship company's ships development and introduction work is going forward on overall plans for scientific labor organization aimed at increasing labor productivity, the efficient use of ships, an improvement of the quality of the fleet's entire work through the elimination of non-productive losses of time, a decrease in idle time, an economical expenditure of fuel and lubricants and materials and tools, ensuring delivery schedules and the safekeeping of freight, eliminating defective work through the fault of the crew, and strengthening labor and production discipline. A special methodology has been developed in the steamship company to assist crews in putting together

such a plan. An improvement of scientific labor organization will make it possible during the 11th Five-Year Plan to increase labor productivity in shipments by more than two percent.

The steamship company is accomplishing large and difficult tasks to increase the labor productivity of shore workers. Today 951 people are working according to the occupational doubling up and expansion of service zones principle, and of them 504 in the ports and 449 at plants. The conventionally released number comes to 346 people.

In speaking about the tasks which are being accomplished in the steamship company to ensure an increase in labor productivity at shipments and in loading and unloading operations one must not forget the problems which have not been solved not only in our steamship company, but in the branch as a whole. First of all these are the mechanization of labor intensive processes in ship repairs and loading and unloading operations, and the creation of new transshipment complexes which are capable of increasing output by several times and decreasing fleet idle time during processing. The task of creating a qualitatively new specialized fleet continues to be no less important. Only in this case will be labor expenditures of the floating staff and of the shore workers be substantially reduced and will productivity increase.

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OCEAN AND RIVER

MINISTER OF MARITIME FLEET INTERVIEWED

Moscow MORSKOY FLOT in Russian No 7, Jul 81 pp 4-7

[Interview with USSR Minister of the Maritime Fleet T.B. Guzhenko by a correspondent from the English weekly FAIR PLAY SHIPPING WEEKLY; date and place not specified]

[Text] [Question] What is the tonnage, composition, age, and structure of the Soviet Maritime Fleet?

[Answer] As of 1 January 1981 the Soviet transport fleet included 1,745 vessels with a total deadweight of 18.6 million tons. This tonnage is accounted for by 6.5 million tons of tankers, 1.1 million tons of ships of the OBO type /expansion unknown/ and 11 million tons in the dry-cargo fleet.

The structure of the Soviet merchant fleet is oriented toward meeting the needs of national foreign trade and coastwise shipping in the country. For this reason Soviet shipping enterprises do not order an especially large tanker for "cross-trade." In particular, the deadweight of the largest tanker sailing under the USSR flag comes to 150,000 tons, which today is considered an average size.

The tonnage of the Soviet dry-cargo fleet is distributed among the following groups: all-purpose, basically twin-deck, ships--6.2 million tons of deadweight; timber carriers--2 million tons; bulkers--1.6 million tons; container carriers and roller-type ships--.5 million tons; refrigerator ships--.15 million tons; ice-breaker transport ships--.1 million tons; and lighters, ships for heavy and non-standard cargos, barge-tugs, and other specialized ships--.35 million tons.

The average age of the dry cargo tonnage is around 11 years, and that of the tanker tonnage--12.3 years. In citing these figures, I think I am myself inviting an additional question: is not the average age of Soviet ships too great for the Soviet Union's rapidly expanding foreign trade. Such a question is justified. It is for this reason that for the forthcoming five-year period the USSR Ministry of the Maritime Fleet has made up a program of the replacement of obsolete ships. It became necessary, of course, to "sacrifice" quantitative growth for the sake of qualitative renewal.

[Question] Tell us about the development of the Soviet Maritime Fleet during the

new five-year plan. How large are the resources which are being allocated for the construction of ships? What types of ships are you going to stop building and what kinds of changes will occur in the construction of ships?

[Answer] I have already observed that we intend during the next five years to place our major efforts in the replacement of obsolete tonnage. True, the construction of new ships is more expensive today than five-six years ago. There are many reasons here--the loading down of ships with expensive additional equipment and mechanisms, stricter requirements in the international conventions and rules, and, with orders at foreign wharfs, also the influence on inflation.

Soviet shipping enterprises have "accumulated" approximately the same financial funds for the new ships orders for 1981-1985 as during the preceding five years. But for reasons which I have already mentioned, the total amount of the tonnage being ordered will be less than during the previous five-year plan, and will come to slightly more than three million tons deadweight.

We shall not see any serious changes in the structure of the Soviet fleet at the end of the 11th Five-Year Plan. The construction of bulkers of the "Dmitriy Donskoy" type will be continued, 10 railroad ferries of the "Sakhalin" type are being ordered for the Caspian Sea, and the construction of tankers of the "Pobeda" type (dead weight--65,000 tons) and rolkers of the "Kapitan Smirnov" type is also continuing. Perhaps the greatest difference from the program of past years will be the order for the construction of around 28 dry-cargo Arctic sailing ships with especially strong hulls. Several types are planned: with deadweights of 15,000 tons, 8,000 tons, and 4.5 thousand tons. They are designed for year-round navigation along the Northern Sea Route, which is of great importance for the country's economy in connection with the program for the active industrialization of Northern Siberia. Two lighter carriers of the LESH ice class type will also be built to take care of coastwise shipments in the Far East.

Taking account of the writing off of obsolete ships, we expect that by the end of 1985 the Soviet transport fleet will include approximately the same number of ships as at the present time. The total deadweight will be somewhat larger than the present one and will come to 19 million-19.5 million tons.

[Question] What kinds of ships for the Soviet Maritime Fleet are now being built in the USSR and abroad? Why does the USSR order ships at foreign yards for its own fleet?

[Answer] Usually whether a ship is ordered in the USSR or at a foreign yard is determined by the specialization of ship building plants and by the existence of a ready design. This is cheaper than to develop new production solutions. For example, the Novorossiysk Steamship Company will be needing tankers with a freight capacity of 50,000-60,000 tons. For this reason it has continued its order for a series of ships of the "Pobeda" type which were built in 1979-1980 in the USSR. However, the steamship company also needs tankers in the 12,000-and 15,000-ton class, and it has ordered them through the All-Union "Sudoimport" Association and in Yugoslavia where shipyards have already produced such ships. Or take, for

example, Arctic ships. Finish shipbuilders have excellent experience in this field. They have built such ships for us in the past. And this time also we have ordered a series of ships with a deadweight of 15,000 tons.

In a word, an international division of labor has developed in shipbuilding which is advantageous both to the shipbuilders and to the clients, and here our ship enterprises in no way differ from other ship owners. It is on this basis that we have long-term agreements with shipbuilding plants in Poland and the GDR which also supply ships to the the Soviet Merchant Fleet. Of the total new tonnage, approximately one-half will be accounted for by the Soviet plants, while the other half will be made up of supplies from abroad.

[Question] What kinds of new ship designs are being prepared in the USSR at the present time, for example, the "Vavchuga" class, a nuclear container carrier, and others?

[Answer] Our engineers, as, incidently, the engineers of other countries with developed shipbuilding are working on improvements of ship equipment, traffic systems, and ship design. A group of engineers from the Mikhaylovich Ship Building Institute are developing, for example, the design of a sail bulker. Although I personally do not think that in the next 10 to 15 years sailing vessels will be able to gain any kind of appreciable place in the world fleet.

As for a nuclear container carrier, we plan to begin during the forthcoming five-year plan the construction of such a vessel for the Arctic. I believe that merchant vessels with nuclear power installations will become relatively widespread even before the end of this century. There have to be sufficiently reliable guarantees, chiefly in the eyes of public opinion, against a possible leakage of radiation emissions. Our many years of experience in operating atomic ice-breakers says that such guarantees already exist. And the cost of nuclear energy, as is known, is getting close to the cost of the traditional energy sources. So that for future sailors nuclear merchant ships will be as ordinary a phenomenon as diesel ships are in our day.

You ask about the diesel ship of the "Vavchuga" class. This vessel has a very limited application and is designed for supplying small settlements on the coast of the Arctic Ocean. We are preparing to order only a small series of ships based on this design; no modifications are planned.

[Question] What kind of reequipping of existing ships is planned? In particular, will the power installation of the Rolker "Kapitan Mezentssev" be replaced?

[Answer] If you mean the now popular replacement of steam turbines with the more economical diesel engines, then such plans do exist for certain tankers of the "Krym" type.

As for the modernization of ships of the "Kapitan Mezentssev" type, I have no knowledge of the existence of such intentions. You, apparently, have been incorrectly informed. The Black Sea Steamship Company which has been ordering ships of this

type has agreed with the shipyard that in the future diesel engines will be installed on them. This will result in a decrease in speed, but with the existing prices for fuel this kind of technical decision is completely justified from the economic point of view.

[Question] Tell us about the structure of the basic shipping lines and about possible changes in their organization: For example, on the Odessa-Baltorient line?

[Answer] First of all, a few words about the general situation in world line shipping. During the last two to three years competition in shipments has exceeded all permissible limits. In the Pacific Ocean, yes and to no less an extent in the Atlantic there is, in essence, raging a ferocious chartering war. For example, in 1979 the Soviet line "Fesco Atlantic Gulf" was compelled to cease its activities, while the "Fesco Pacific Container" reduced its operations by almost 70 percent. The work of other Soviet lines both as members of conferences and as independent operators has also been subjected to changes.

Judging from everything, during the next two to three years line shipping will come up against serious difficulties, the chief of which is a surplus of line tonnage compared to demand.

The USSR Merchant Fleet does not have any ambitious plans in line shipping and does not intend to become a victim of destructive competition. We have long-term commitments with regard to national foreign trade and to shipments along the Northern Sea Route. For this reason, Soviet shipbuilding enterprises are already today ensured employment at least until 1986, especially since our plans call for a relatively small addition of tonnage for the next five years.

[Question] I would like to know about the capital investments and the operating expenditures of Soviet shipping companies.

[Answer] With respect to capital investments and their depreciation Soviet shipping enterprises find themselves approximately in the same position as the ship owners of other countries. True, our financial rules and regulations do not contain privileged conditions which make it possible for a ship owner, as happens in western countries, to get back his invested capital within 10-12 years. In the Soviet Union the depreciation periods for the original value of a ship are close to the length of its technical life and come to 15-18 years. In addition, the annual depreciation allotments are distributed in even parts throughout the entire period. This method of depreciation like, incidentally, any financial rule in any country, has both advantages and certain negative aspects.

As for operating expenditures, their structure in Soviet shipping enterprises is practically the same as with any other ship owners. The most serious difference consists, perhaps, in the fact that in the Soviet Union there is no mandatory insurance for a ship's hull and machinery department. Therefore, our shipping enterprises frequently do not have these insurance expenditures. True, in recent years insuring the hull and machinery of a ship has been becoming more popular among Soviet ship owners. But the USSR Ministry of the Maritime fleet allows

them to decide themselves which path is the best one.

Soviet shipping enterprises also get definite advantages from the fact that the cost of a bunker in the USSR is lower than world prices. But this is a temporary phenomenon. During the coming five-year plan domestic prices for fuel will approach world prices.

[Question] What kind of influence did the American embargo have on the development of the Soviet Maritime Fleet?

[Answer] Practically none. Such actions, in general, are unable to have any kind of appreciable influence on long-term plans in any branch of the economy. After all, we are building our fleet on the basis of the much broader tasks of meeting the needs of all of the national trade of the Soviet Union, and not for the sake of trade with any single country.

From the point of view of short-term commitments to freight shippers and charterers, Soviet shipping companies did suffer, of course, some losses; however they were so negligible that they cannot be compared to the losses which fell to the lot, for example, of American farmers as a result of the embargo. Suffice it to say, that not a single Soviet ship was laid up because of a lack of employment.

[Question] How does the USSR regard the Code of Behavior for Line Conferences?

[Answer] The Soviet Union joined this International Convention in June 1979. As is known, the Code of Behavior for Line Conferences has not yet come into force and, for this reason, it is difficult now to speak about the practicality of some of its regulations. It seems to me that the Code's weak sides, if they do exist, can only be disclosed during the course of its universal application. It is for this reason, in fact, that it was decided in 1974 in Geneva to hold a new conference to review the Code five years after it came into force.

On the whole, we believe the Code of Behavior for Line Conferences to be a useful international document which can assist a more harmonious and ordered development for line shipping. In this sense it cannot but give rise to amazement that the maritime administrations of certain European states are striving to deprive the Code of its chief function as a universal international Convention. I have in mind the reservations which were approved in the Common Market in 1979. Without going into a detailed analysis of the content of these decisions, suffice it to say that the employment of the Code, if the EEC reservations are recognized, will be subordinated to dual standards. Some of them, which differ greatly from the regulations of the Code, will be applied by the line operators of the EEC countries, while others will be applied by the remaining participants in the Convention.

Thus, we are speaking about a serious collision in international law.

[Question] How does the USSR regard the so-called flags of convenience?

[Answer] "Open registrations" do not influence and cannot influence the long-term development programs of the Soviet merchant fleet.

However, we are aware of the negative consequences which are the result of this quite strange phenomenon in the sphere of social and labor relations, in the field of the protection of the sea and its pollution and, not least, as a source of uncontrollable and speculative orders for the construction of new ships. The latter circumstance should disturb not only the developing, but also the "traditional shipping" countries. While for the former "open registrations" are a brake upon the development of their own national fleets, for the latter they also cannot be a matter of indifference since they give rise to a constant surplus in the world's fleet and a prolonged depression on the chartering markets. Perhaps the only ones who gained from the chronic surplus of the supply of tonnage over demand are the multinational corporations.

[Question] How does the Soviet fleet look upon membership in line conferences?

[Answer] Soviet maritime circles accept the system of chartering as a reality of present-day line shipping. No other better forms of organizing line shipments exist as yet. We are prepared to encourage cooperation between Soviet shipping enterprises and foreign partners within the conferences on a mutually advantageous and equal basis.

Moreover, the USSR Ministry of the Maritime Fleet has taken a number of steps in this direction. In July 1976, for example, a memorandum was signed between the Federal Maritime Commission of the United States and the USSR Ministry of the Maritime Fleet which defined the practical framework for cooperation between Soviet ship owners and line conferences operating in the North Atlantic and Pacific Ocean. Unfortunately, this memorandum was subsequently disavowed by the American side.

Another example. In August 1977 experts from the USSR Ministry of the Maritime Fleet and the Ministry of Trade of Great Britain, with the participation of representatives from the General Council of British Shipping, worked out and initialed a complex of cooperation principles in international line shipping. However, only two months later the Ministry of Trade rejected their further use.

In a wider sense, these facts mean that there are still circles which are opposing equal cooperation in world shipping and which would like to legitimize double standards in merchant marine sailing.

It is absolutely obvious that this kind of approach cannot bring any dividends, for attempts to turn discrimination into an official policy testify only to the nearsightedness of the initiators.

[Question] What is the attitude of the USSR to the accusations by the West concerning a dumping policy allegedly aimed at the destabilization of maritime shipping?

[Answer] I think that the authors of such accusations themselves do not very much believe what they say. The facts constantly refute the inventions. Judge for yourselves: The Soviet merchant fleet's share comes to only 3.7 percent of world tonnage. At the same time, those whom you call the West control approxi-

mately 55 percent of the world's merchant fleet. In addition, around 30 more percent of the ships belong to the same ship owners and sail under "flags of convenience." How can a fleet which is employed basically in servicing USSR national trade and which comprises less than four percent of the world fleet destabilize the operations of the remaining 96 percent?

As far as dumping is concerned, here also it is impossible to find proof. In offering their services, Soviet shipping enterprises do not impose their forms and methods of commercial work upon anyone. On the contrary, they are compelled to adapt themselves to the practice of market relations which is dominant today in world merchant seafaring and which developed centuries ago. If they do this quite effectively, this is no reason for accusations.

We are told, however, that yes, it is true, the USSR merchant fleet is not capable of destabilizing world shipping, but that in individual directions, especially in line shipments, Soviet lines are allegedly squeezing out traditional shippers by using "predatory" practices.

But if we are talking about sea routes, which can be counted on one's fingers, would it not be simpler to sit down at the negotiating table and cold-bloodedly discuss the competitive situation in a search for mutually acceptable solutions, instead of inciting political passions.

I have personally gotten the impression that some people need this campaign in order to distract attention, under the cover of noisy propaganda, from their own expansionist activities in world merchant seafaring.

[Question] What is the competitive threat to western shipping from the Trans-Siberian railroad?

[Answer] As with any transportation enterprise, the success of the Trans-Siberian Container Service depends upon its efficiency which in this case has been set in the very conception of containerization. The Trans-Siberian Container Service is, of course, taking away some shipments from shipping lines, including Soviet lines. But a desire to restrict its shipments is equal to an endeavor to stop technological progress.

For this reason, both from the technological and from the economic points of view shipbuilders must, in principle, get used to the idea of regardless of whether the Trans-Siberian Railroad is used for container shipments or not, nevertheless "land-bridges" will exist and develop in other similar directions. For everybody who is connected with the maritime business this means a certain loss of a part of the containers which were previously shipped by sea. These losses of theirs are not so great as, for example, the losses of the owners of passenger liners from whom passengers turned away in the 1950's, giving their preference to the airlines.

[Question] What is the reaction of the USSR to the desire of the EEC to put Soviet shipping on certain international lines under control?

[Answer] We look upon such intentions as still another attempt to employ double

standards instead of the generally recognized norms of international shipping. If these attempts are realized, it can be said that an end will have been put to the most favored nation policy in shipping. It will probably be replaced by bilateral agreements. I speak about "bilateralism" quite confidently because no shipping regimen is capable of stopping bilateral maritime trade. Well, you can judge for yourself as to who gains from "bilateralism."

[Question] What is the attitude in the USSR to the proposals of western countries regarding equal shares on joint routes, especially with regard to the Federal Republic of Germany?

[Answer] If you mean joint lines of ship owners of the countries which trade with one another, then our shipping enterprises have concluded such agreements with the ship owners of India, the Federal Republic of Germany, Bulgaria, England, France, Belgium, Algeria, and even the United States. The USSR Ministry of the Maritime Fleet supports the conception of parity in the shipments of partners.

If, however, you were speaking about the distribution of a total bilateral freight turnover in equal shares among the flags of the trading countries on the basis of some kind of inter-governmental agreements, then in this case we have to speak about the completely different conception of "cargo sharing." As of yet we have not received such proposals either from the Federal Republic of Germany or from other western countries.

[Question] What is the influence of strategic considerations on the commercial activities of the Soviet merchant fleet?

[Answer] Your question reminds me of a recent publication in the American magazine BUSINESS WEEK which believes that Soviet merchant vessels play a completely different role than western ones, that they are tied in with a "growing navy," and that the recent Soviet-Malta agreements in the field of shipping increased the effectiveness of the Soviet naval forces. All of this is based, mildly speaking, on a morbid suspiciousness and is just as far from reality as the political intrigues of the magazine BUSINESS WEEK are from actual business. Soviet merchant fleet organizations have no intention of using their bunker bases on Malta either directly or indirectly for any other purposes than to supply their merchant vessels with fuel.

Let us better trade, expanding shipments both for the western and for the Soviet merchant fleets. This peaceful strategy by the Soviet Union was once again emphasized at the recently completed 26th Communist Party Congress as a basis of Soviet foreign policy. Otherwise, one can talk oneself into absurdities, proving that table spoons are produced in the USSR only in order to feed soldiers, while watches are produced in the United States in order to launch missiles by time.

[Question] Explain the importance of the Soviet Maritime Fleet as a provider of foreign currency.

/Answer/ The Soviet Maritime Fleet's share in the country's foreign trade balance comes to a little more than 1.5 percent. The basic income here is accounted for by the payments of Soviet charterers--Soviet Foreign Trade Associations--which are paid by our shipping enterprises in foreign currency. The income from "cross-trade" is negligible in the country's foreign trade balance. In addition, it is necessary for us to charter many ships of foreign ship owners for which foreign currency is also expended.

[Question] What, in your opinion, are the prospects for the development of international shipping and what is the role in it of the Soviet Maritime Fleet?

[Answer] I would think that during the 1980's the chief problem of international shipping will continue to be a surplus of capacity in the world's fleet compared to the demands for maritime transport services. It is important to emphasize here that the regulating function of the charter market has been seriously transformed and no longer plays a decisive role in balancing supply and demand. I will cite only one example.

During the Depression of the 1930's the decline of demand in maritime trade had a serious effect upon the world's fleet. By 1935 its tonnage had decreased by almost 10 percent. This fact which was not very pleasant for many ship owners testified nevertheless that the gap between supply and demand had been narrowed and this resulted in a stabilization of the chartering market in the second half of the 1930's.

In our day we see a completely different development. During the years 1975-1980 the tonnage of the world's fleet, despite a depression, increased constantly and, moreover, substantially more rapidly than the amounts of maritime trade. This process continued even with a decrease in maritime trade compared to previous years. This means, in my view, that the concentration of capital in shipping had reached such a level that fundamental economic decisions were taken regardless of market tendencies or, at least, only partially with regard to them.

There is also another circumstance. You know very well about the intentions of the developing countries to make efforts to create their own national merchant fleets. These intentions are so justified that even in the western countries no one would risk openly opposing such plans. The secretariat of the YUNKTAD /UNCTAD--United Nations Conference in Trade and Development/ is formulating a program quite concretely--by 1990 the share of the developing countries is supposed to come to 20 percent, and by the year 2000--to 40 percent of world tonnage.

Both circumstances about which I am speaking testify to the necessity for searching for some kind of new universal mechanism which would regulate at least those aspects of relations in international shipping which the market mechanism is no longer capable of determining.

In this sense an interesting development is taking place in line shipping. As it seems to me, the system of traditional line conferences is living through a serious crisis. Apparently, instead of cartels which are united by rate agreements, international consortiums based on the joint ownership of containers and other production equipment will soon become widespread.

As for the role of the Soviet Merchant Fleet in international shipping, we offer equal and mutually advantageous cooperation to every one who is prepared to be guided by these principles. We have splendid examples of such bilateral cooperation with India, France, Sweden, Algeria, and other countries. IMKO /IMCO--Inter-governmental Maritime Consultative Organization/ and the non-governmental organizations like the International Maritime Committee, the International Association Classification Societies, and others like them may also serve as an example for cooperation on a multilateral basis. The same can be said about those 12 line charter conferences whose members are Soviet ship owners.

In conclusion I can only emphasize that world shipping, as the most international branch of the world economy, cannot develop normally in an atmosphere of confrontation and charter wars. Coexistence and cooperation on the sea routes is the only alternative.

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OCEAN AND RIVER

COORDINATED TRANSPORTATION PLANNING

Moscow MORSKOY FLOT in Russian No 7, Jul 81 pp 12-14

[Interview with Chief of the Riga Port V.M. Yevstigneyev by correspondent V. Golubev; date and place not given]

[Text] [Question] Valentin Mikhaylovich, you lead the coordinating group of the Riga Transportation Center which began to operate in accordance with intercoordinated continuous planning in September 1978. What are the advantages obtained by the collaborators from the changeover to this system?

[Answer] I should probably first tell you who is a member of the transportation center which was created on the basis of the Riga Maritime Port. It unites the Latvian Maritime Steamship Company, the commercial port, the Riga Department of the Baltic Railroad, the station Riga-Krasta, the "Rigatrans" Association of the Ministry of Motor Vehicle and Road Construction of the Latvian SSR, the Riga office of the All-Union "Soyuzvneshttrans" Association and the Latvian River Steamship Company.

Working in a single transportation conveyor, the Riga Port achieved the following indicators during that time: the freight processing plan was successfully fulfilled with more than 127,000 tons of above-plan freight shipped, and according to the direct variant--3,541,000 tons of freight; the static workload increased by one railroad car, which provided a conventional release of 1,431 railroad cars for the needs of the economy; the economy of gross lay time came to 8.5 percent, or 756 ship-days.

Special mention should be made of the decrease in railroad car processing time. In 1980 we processed more than 110,000 cars, reducing the normative car processing time by 19.6 percent, and compared to 1979, despite the increase in the labor intensiveness of freight processing, the time was decreased by .3 hours, or 10 percent.

In the first quarter of 1981 time expenditures for car processing decreased compared to the norms by more than 40 percent.

The volume of freight processing increased by 27 percent, and the volume of transshipping freight by the direct variant increased by 57 percent.

In the beginning of 1981 we reorganized the work of the transportation center's coordination group. Now every morning an operations group examines the results of the center's work during the past day and solves the problems of the current day. Once a month the coordination group examines the results of the center's work in accordance with the long-term plan, and also other questions of the transportation center's overall measures plan. This method of work by the coordination group is yielding good results.

Our collaborators have also obtained a considerable advantage. For example, the "Rigatrans" Association which moves freight out of the port, by having a continuous schedule-plan of the port's work with the ships which are being unloaded, their arrival times, type of cargo, and so forth specified, has an opportunity to better prepare itself for moving the cargos and to make efficient plans for the use of motor vehicle transport. This has made it possible for the motor vehicle transportation workers to substantially increase the efficiency and quality of their work.

With the introduction of NPGRTU the tendencies which were bringing the collectives of related enterprises closer together became even stronger. And this can best be seen in the development and perfecting of socialist competition among the collectives of the related transportation organizations. The motto of the overall socialist competition which has become widespread--"On Every Ship, On Every Railroad Car--Record Productivity!" --is close and understandable to the seamen, the port workers, and the railroad workers.

The organization of through dispatcher shifts of the port and railroad station Riga-Krasta and agreements on advanced and high quality ship processing have become a norm of our relations.

We attribute great importance to the agreement between the port workers and the seamen on the scheduling of ship traffic on the lines and on processing ships on time. In view of the fact that rolters are the most profitable ships, the port workers have achieved a decrease in their processing time of almost 50 percent.

We have good, businesslike contacts with the Latvian river transportation workers. The shipment and transshipment of freight, especially mineral-construction freight, is efficiently coordinated.

To speed up the movement of freight, to decrease idle time by the rolling stock, and to achieve the shipment of the largest amount of freight--this is the final result to which the related transportation enterprises are striving by coordinating the joint actions.

[Question] And, nevertheless, Valentin Mikhaylovich, the port workers probably have problems and undecided questions both within the transportation center and outside of it? Tell our readers about this.

[Answer] There are, of course, many problems. Internal and external ones. The basic ones are the following: An insufficient number of acceptance and transfer officers at the Riga-Krasta station. But neither the Riga department of the road

nor the Baltic Railroad are taking any practical measures to solve this problem. Its price is enormous--idle time by the fleet and by railroad cars. The capacity of the tracks and, on the whole, of the track works of the Riga-Krasta station is the basic limiting element in the work of the transportation center. The Baltic Road has been dragging out the solution of this problem for many years.

Citing every possible reason, the Riga Department of the Road and the Administration of the Baltic Road have been systematically failing to carry out the government's decree on providing ports with suitable and well-equipped railroad cars for shipments of grain and loose sugar. The port continues to be compelled to divert labor power for the installation of grain shields, the sealing of railroad cars, the other jobs on their shunting tracks.

The beginning of the construction of a new three-port station on the island of Kundzin' where a large port freight district is being built has been dragging on for an indefinite time. The construction of railroad sidings is not being performed here either.

The active intervention of the leadership of the Baltic Railroad and of the Ministry of Railways is needed to speed up the solution of these problems.

[Question] Because of your crowded conditions in the port containers are stacked in four stories. How is the construction of the container terminal going?

[Answer] Yes, it is not that it has become crowded in the port's first district at the old terminal, but practically impossible to organize the intensive processing of the fleet due to a lack of docks and areas. In addition, we have begun to reconstruct the old docks, setting them at optimal depths, and that, as you know, is connected with many difficulties.

The Riga workers are tying great hopes to the construction of the new port district. The first stage of the container terminal has already been put into operation and we are beginning to process the fleet there. The construction so far is going within the plans, however, it is connected with a number of problems, the basic one of which is the absence of a new pre-port station. Thus, in two years the port will have a powerful shipping complex, but there will not be enough railroad sidings going there.

The container terminal which is being built will be a modern and well-equipped shipping complex which will be able to accept large-capacity container carriers and rolters.

In my opinion, in the article "NPGRTU: Three Years of Experience" (MORSKOY FLOT, No. 9, 1980) the authors O. Terekhov and V. Tyurin are guilty of some imprecisions in the formulation and interpretation of individual well-known concepts and categories, which even deepens the difficulty of understanding and using in practice a large number of the Regulations of the NPGRTU by individual port and steamship company specialists, especially when analyzing fleet processing and the reasons for idle time.

For this reason, it is not accidental that the authors write: "An improvement of the system of continuous planning for the operations of various types of transportation is still not meeting with the proper understanding from the collaborator enterprises," explaining this, strange as it may seem, by the "one-sidedness of the interests of the port or ship owner."

However, one cannot but agree with the authors about the fact that in order to improve the work of ports and of transportation centers as a whole there has to be a strict specialization of freight flows and a line form of the organization of maritime shipments; that is, the creation of uniform transportation-technological processes which in the future can be normed and brought to the point where they can be carried out in an automated management system.

It is not accidental that in raising the question of the stability of the planning of a transportation center's operations the authors referred to the experience of processing line ships. However, their demand that there be a reserve of time or resources as a guarantee of the line's stability is not correct, since this contradicts the principles of NPGRP.

I am also not in agreement with the fact that in 1976-1977 the stability of NPGRP was ensured only "thanks to compliance with previously announced ship processing schedules, the regulation of the work of the fleet on their basis, and a decrease in waiting time for processing."

In this case, in my opinion, efficiency was achieved during the experiment thanks to the good external conditions for its successful completion in one of the ports.

Nor can I agree that the problem of stability should be solved not by means of "increasing the shift work of the port equipment, but by means of increasing the efficiency of the use of the fleet." Concepts have been mixed up here. The efficiency of fleet operations is directly dependent upon the level of the use of port equipment. Specialized complexes which are outfitted with expensive equipment have to be used round-the-clock and with a heavy workload which, as the work practice of today's ports shows, has never yet led to stoppages and disturbances of rhythm. And if the NPGRP has to be corrected here, it is obvious that either the schedule has been made up with deviations from the norms, or the reason is in something entirely different.

The employment of "enlarged processing indicators for ships in port which will have a time reserve set in the structure that guarantees the stability of plans as a whole" contradicts the principles of NPGRP and the methodology for using the resources of a port. The Regulation "Procedure For Conducting NPGRP" which has been approved by the ministry states that "the last of a line of ships included in the NPGRP has to be provided with labor resources at a level of not less than 80 percent of the numbers stipulated in the consolidated norms for the number of port workers"; that is, time reserves or resources reserves, as such, are not provided for by the system, which is the basis for their efficient use in accordance with the established capacity of the port expressed by the number of mechanized lines and their normative concentration.

[Question] What is your opinion of the attempt of the Leningrad port workers to apply the sphere of action of the intercoordinated planning system to enterprises which are constant suppliers of ~~export~~ cargoes?

[Answer] The intercoordinated planning of the "shipping in and out" of freight, including that of suppliers, should without a doubt produce a positive effect. Port workers know that for a long time we have been using the so-called "freight recall system" under which freight is delivered to the port at a "scheduled" ship position and with the mandatory condition that it be transfer by the direct variant.

The inclusion of suppliers into the sphere of NPGRTU is a very difficult matter and an immediate effect should not be expected, although it is necessary to work in this direction. It seems to us better to work first with suppliers of mass commodities on stable freight flows.

Individual commodities, including passenger automobiles, can scarcely, in our view, be directed into the sphere of a continuous stable freight flow, since they, as a rule, do not go by the direct variant, but require definite transportation and shipping processing and holding at warehouses in accordance with countries, makes, and so forth.

For this reason it is a very difficult matter to fit these kinds of freight into an automated management system mode and it requires a large amount of organizational and technical support, especially at supplier plants and at the organizations of the Ministry of Foreign Trade.

[Question] What is your attitude toward the proposal regarding a strict division of responsibility for the gross intensity ship processing indicator in the NPGRP regimen?

[Answer] A favorable one. I believe that each side must bear responsibility for the quality of its work: for the quality of the work schedules of ports--the GKHO [expansion unknown]; for the quality of fleet traffic--the ship owners; and for the quality of fleet processing and services--the ports.

The development of a system for calculating the level of the gross intensity of fleet processing in keeping with the method which is proposed by the Leningraders does not present any special difficulties, and its effectiveness can, as an experiment, be tested on the basis of one or two ports.

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OCEAN AND RIVER

SHIP EQUIPMENT DEFECTS DISCUSSED

Moscow MORSKOY FLOT in Russian No 7, Jul 81 p 47

[Article by V. Vanin, captain of the diesel ship "Boris Buvin" of the Estonian Steamship Company: "Eliminate Defects in Time"]

[Text] The problems raised in the article by L. Kryshtyn (MORSKOY FLOT, No. 6, 1981) are very important and concern not only tankers. Ten rolkers of the "Ivan Skuridin" type with a rotating bow ramp are being operated successfully in the Far East, the Baltic, and the Black Sea. In the Estonian Steamship Company the first rolker, the "Nikolay Vilkov," appeared in early 1978, and then an additional three were taken; the "Boris Buvin," "Aleksandr Osipov," and "Timur Frunze." They operate on the following lines: the Baltic--Western Africa, Baltic--Great Lakes, Cuba, Mediterranean Ocean--Western Europe, and Balt--Levant. A substantial period of operating time has allowed the seamen to master these modern vessels well and to discover their virtues and certain of their annoying defects which, unfortunately, already existed in the design.

As a result of changes in the design which were made during the construction stage it was possible to bring their sailing range to 12,000 miles, instead of the planned 5,000 miles, without additional coaling. The amount of washing water which is taken on for a voyage has been almost doubled, which is very important when the ships of the Estonian Steamship Company are working the ports of Western Africa. As a result of the efficient use of the freight decks the number of "Zhiguli" or "Moskvich" automobiles which are shipped has been brought to 600. These, and also certain other measures, have made it possible to substantially increase the efficiency of rolker operations. The ships have delivered large consignments of barrels, sawn timber in packets, cocoa cream in cardboard boxes, and heavy wheel equipment.

The ships of this series have received a very high evaluation and, to a substantial degree, deservedly. However, many seamen quite rightly expressed the opinion that the first eight ships of the series also have serious shortcomings which prevent their operation with the greatest economic effect. Thus, there is no stern anchor on the ship. A rolker with a bow ramp but without stern anchors is compelled to occupy the same kind of dock for cargo operations as ordinary dry-cargo ships. This shortcoming is not so noticeable in European ports, but it is felt in African and Near Eastern ports where there are too few piers and a lot of

waiting ships. Thus, for example, during voyages with the same cargo of motor vehicles from Hamburg to Alexandria the diesel ship "Timur Frunze" which has stern anchors unloaded in Alexandria in one day, while the "Boris Buvin" which does not have stern anchors stood there waiting for a dock for seven days and, in addition, had two moorings. Moreover, the Great Lakes along the Saint Lawrence river route have been closed to ships without stern anchors.

The installation of stern anchors, of course, with regard to the waters sailed, is an urgent necessity which in the future will result in a substantial economic effect.

The present requirements connected with preventing oil pollution are very stringent. In the future it is to be expected that they will be even more stringent. Rolkers carry various kinds of motor vehicle and tractor equipment on their upper decks. During rains streams of water wash lubricants and various kinds of dirt from the machinery and mechanisms. All of this goes overboard and pollutes the port basin. This occurs because the ships do not have an apparatus for collecting polluted water from the upper deck into special dirty-water tanks from which it can be either put ashore or isolated in permitted zones. This issue might seem not too important for ordinary cargo ships, but it is very important for all rolkers with equipment on deck. The technical possibilities for collecting such water on rolkers of the "Ivan Skuridin" type exists.

In addition, the first eight ships have no capacities on the fuel tank air pipes for collecting possible fuel discharges during bunkering. Such capacities are required according to the bunkering rules in certain ports. The ships do not have rubbish and oil rag incinerators such as exists on many modern ships. There is also no electric hoist for the pilots, which, with the substantial height of the freeboard (around 8.5 meters), leads to great difficulties, while it is easy to install such a hoist.

The power of the rudder apparatus (around 370 kilowatts) does not ensure safe mooring during strong winds. Unfortunately, it is very difficult to eliminate this defect now since substantial work on the hull is needed.

The design had obviously become obsolete even before the construction of the first ship, but even after numerous criticisms by seamen almost nothing was done until the ninth ship, when the diesel "Timur Frunze" received stern anchors. And they immediately brought a large economic effect.

In order to solve the above-described problems the remaining ships must be modernized during the process of operation. This is more expensive and less convenient than during construction, but, in the final analysis, modernization pays for itself.

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